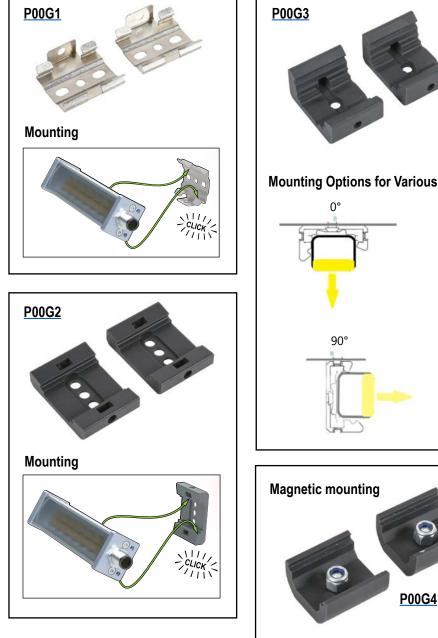
lumher

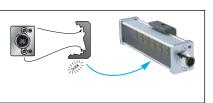
### **Lumher Mounting Accessories For PD-Series Lights**

The PD series bar lights offer a wide variety of anchoring options. A number of different mounting bracket options are available, including stainless steel and plastic (ABS) models. These include fixed anchors with multiple installation positions as well as rotating anchors for greater flexibility.

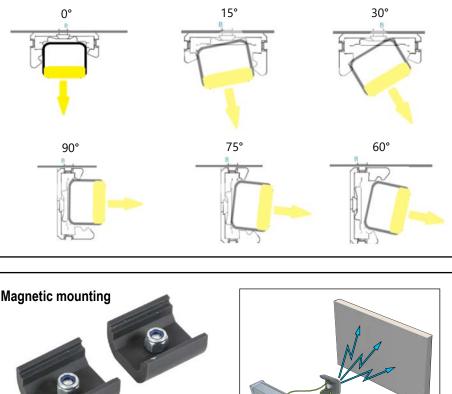
Lumher PD Series Fixed Mounting Bracket Selection Guide								
Part Number	Price Adjustment Type Setting Angles Material Mounting Draw							
<u>P00G1</u>	\$;6h[8:	Fixed	0° or 90°	Stainless steel	Customer-supplied screws	PDF		
<u>P00G2</u>	\$;6h[9:	Fixed	0° or 90°	Plastic	Customer-supplied screws	PDF		
<u>P00G3</u>	\$;6h[a:	Fixed	0°, 15°, 30°, 60°, 75°, or 90°	Plastic	Customer-supplied screws	PDF		
<u>P00G4</u>	\$;6h[b:	Fixed	0°	Plastic	Magnetic	PDF		



#### **Mounting Procedure**



#### **Mounting Options for Various Setting Angles**



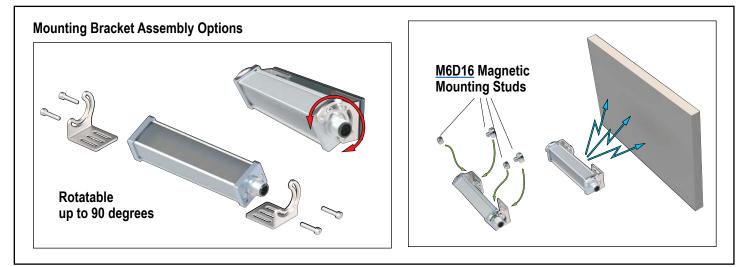
### Lumher Mounting Accessories For PD-Series Lights

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The PD series bar lights offer a wide variety of anchoring options. A number of different mounting bracket options are available, including stainless steel and plastic (ABS) models. These include fixed anchors with multiple installation positions as well as rotating anchors for greater flexibility.

	Lumher PD Series Adjustable Mounting Bracket Selection Guide									
Part Number	Price	Adjustment Type	Mounting Capacity	Relative Orientation of Lights	Material	Mounting (Lights)	Mounting (Brackets)	Drawings		
<u>P00R1</u>	\$;6h[d:	Adjustable	Single	_	Stainless steel	Supplied screws (included)	Customer-supplied screws or M6D16	PDF		
<u>P00R2</u>	\$;6h[e:	Adjustable	Dual	Axial	Stainless steel		Customer-supplied screws	PDF		
<u>P00R3</u>	\$;;6h[f:	Adjustable	Dual	60°	Stainless steel		Customer-supplied screws	PDF		
<u>P00R4</u>	\$;6h[g:	Adjustable	Dual	90°	Stainless steel		Customer-supplied screws or M6D16	PDF		





Lumher Magnetic Mounting Option Selection Guide							
Part Number	rt Number Price Material Description Fits Drawing						
<u>M6D16</u>	\$;6h[h:	Stainless steel	Magnet with M6 stud and lock nut	<u>F00R1</u> <u>P00R1, P00R4</u>	<u>PDF</u>		



M6D16

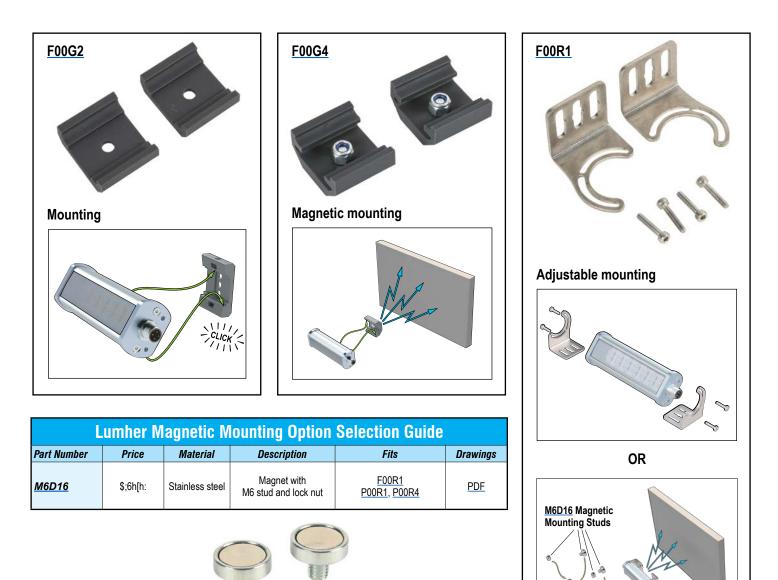
Barcode, RFID, Vision

tBRV-52

### Lumher Mounting Accessories **For FD-Series Lights**

The FD series bar lights offer a wide variety of anchoring options. A number of different mounting bracket options are available, including stainless steel and plastic (ABS) models. These include fixed anchors with multiple installation positions as well as rotating anchors for greater flexibility.

	Contaval Lumher FD Series Mounting Bracket Selection Guide							
Part Number	Price	Adjustment	Setting Angles	Material	Mounting	Drawings		
<u>F00G2</u>	\$;-6h[j:	Fixed	0°	Plastic	For mounting lights: Clip into brackets For mounting brackets: Use customer-supplied screws or M6D16	<u>PDF</u>		
<u>F00G4</u>	\$;6h[k:	Fixed	0°	Plastic	For mounting lights: Clip into brackets For mounting brackets: Magnetic	<u>PDF</u>		
<u>F00R1</u>	\$;-6h[l:	Adjustable	Up to 90°	Stainless steel	For mounting lights: Use supplied screws For mounting brackets: Use customer-supplied screws or M6D16	<u>PDF</u>		



M6D16

### 1-800-633-0405

## Lumher Mounting Accessories For RD, BS and BD Series Lights

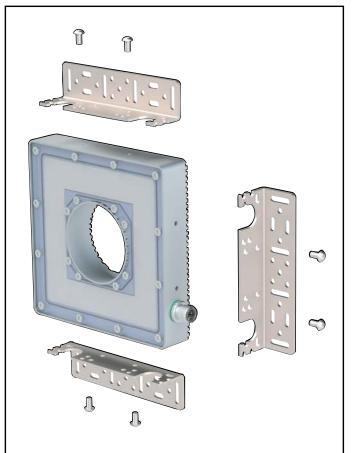
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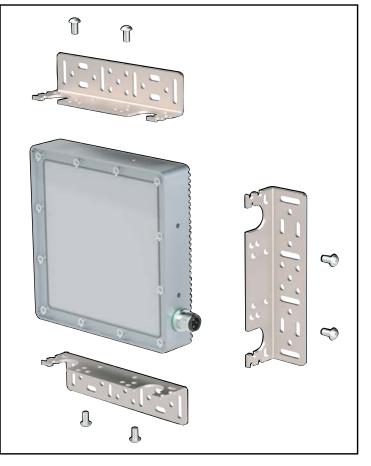
Lumher RD, BS and BD Series Mounting Bracket Selection Guide						
Part Number Price Material		Material	Mounting	Drawings		
<u>B00S1</u>	\$;-6h[i:	Stainless steel	For mounting lights: Use supplied screws For mounting brackets: Use customer-supplied screws	<u>PDF</u>		



#### Mounting Assembly for B00S1 With RD Series Light

#### Mounting Assembly for B00S1 With BS or BD Series Light





# Lumher Vision Lighting Bar Light (PD Series)

# lumher



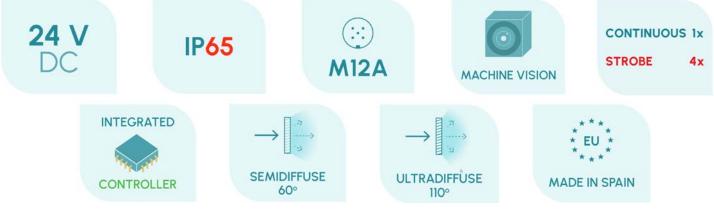
machine vision bar LED lights provides high-powered and uniform illumination over the entire length of the bar light, ensuring uniform lighting conditions for machine vision systems.

Lumher's PD Series of

#### Features

- IP65
- Integrated controller
- Continuous only or strobe-capable models available
- Available in white, red or infrared
- Semi-diffused or ultra-diffused illumination options available

	Lumher PD Series Vision Lighting Bar Light Selection Guide								
Part Number	Price	Light Emission	LED Length (mm [in])	Diffuser	Mode of Operation	Drawings			
PD01PD5CY	\$;06h]8:	White (5000K)	90 [3.54]	Semi-diffused (±30°)	Continuous only	<u>PDF</u>			
PD02PD5CY	\$;06h]9:	White (5000K)	180 [7.09]	Semi-diffused (±30°)	Continuous only	PDF			
PD04PD5CY	\$;06h]a:	White (5000K)	360 [14.17]	Semi-diffused (±30°)	Continuous only	PDF			
PD05PD5CY	\$;06h]b:	White (5000K)	450 [17.72]	Semi-diffused (±30°)	Continuous only	PDF			
PD07PD5CY	\$;06h]c:	White (5000K)	630 [24.80]	Semi-diffused (±30°)	Continuous only	PDF			
PD01ZD5CY	\$;06h]d:	White (5000K)	90 [3.54]	Semi-diffused (±30°)	Strobe-capable	PDF			
PD02ZD5CY	\$;-06h]j:	White (5000K)	180 [7.09]	Semi-diffused (±30°)	Strobe-capable	PDF			
PD04ZD5CY	\$;06h]q:	White (5000K)	360 [14.17]	Semi-diffused (±30°)	Strobe-capable	PDF			
PD05ZD5CY	\$;06h]y:	White (5000K)	450 [17.72]	Semi-diffused (±30°)	Strobe-capable	PDF			
PD07ZD5CY	\$;;06h]!:	White (5000K)	630 [24.80]	Semi-diffused (±30°)	Strobe-capable	PDF			
PD01ZD5UY	\$;06h]e:	White (5000K)	90 [3.54]	Ultra-diffused (±55°)	Strobe-capable	PDF			
PD02ZD5UY	\$;;06h]f:	White (5000K)	180 [7.09]	Ultra-diffused (±55°)	Strobe-capable	PDF			
PD04ZD5UY	\$;06h]g:	White (5000K)	360 [14.17]	Ultra-diffused (±55°)	Strobe-capable	PDF			
PD05ZD5UY	\$;06h]h:	White (5000K)	450 [17.72]	Ultra-diffused (±55°)	Strobe-capable	PDF			
PD07ZD5UY	\$;-06h]i:	White (5000K)	630 [24.80]	Ultra-diffused (±55°)	Strobe-capable	PDF			
PD04ZR5CY	\$;06h]k:	Red (625nm)	360 [14.17]	Semi-diffused (±30°)	Strobe-capable	PDF			
PD05ZR5CY	\$;-06h]I:	Red (625nm)	450 [17.72]	Semi-diffused (±30°)	Strobe-capable	PDF			
PD01PF5CY	\$;06h[2:	Infrared (850nm)	90 [3.54]	Semi-diffused (±30°)	Continuous only	PDF			
PD02PF5CY	\$;06h[3:	Infrared (850nm)	180 [7.09]	Semi-diffused (±30°)	Continuous only	PDF			
PD04PF5CY	\$;06h[4:	Infrared (850nm)	360 [14.17]	Semi-diffused (±30°)	Continuous only	PDF			
PD05PF5CY	\$;06h[5:	Infrared (850nm)	450 [17.72]	Semi-diffused (±30°)	Continuous only	PDF			
PD07PF5CY	\$;06h[6:	Infrared (850nm)	630 [24.80]	Semi-diffused (±30°)	Continuous only	PDF			



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### Lumher Vision Lighting Bar Light (PD Series)



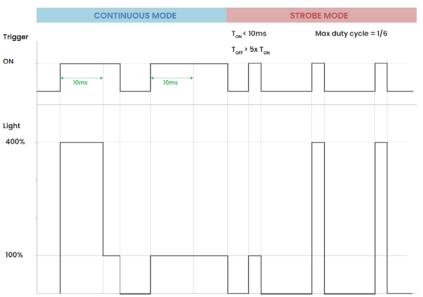
Lumher PD	Lumher PD Series Vision Lighting Bar Light Specifications							
	Continuous Mode	Strobe Mode						
Strobe Input	-	PNP: More than 22V for ON; Less than 1V for OFF NPN: Less than 1V for ON; More than 23V for OFF						
Overdrive	No	Yes						
Strobe Conditions (ON time, duty cycle)	_	For first 10ms, 4X normal brightness; then normal brightness. To re-engage strobe, LEDs must be off for at least 50ms.						
Maximum Rising Time	3	μs						
Maximum Falling Time	3	μs						
Connection	M12 A-coded 4	-pole connector						
Consumption	White: 1.9 W per 90mm [3.54 in] Red: 1.9 W per 90mm [3.54 in] Infrared: 1.0 W per 90mm [3.54 in]	White: 7.6 W per 90mm [3.54 in] Red: 7.6 W per 90mm [3.54 in]						
Minimum Functioning Voltage	22.8	VDC						
Normal Functioning Voltage	24VD	C ±5%						
Maximum Functioning Voltage	25.2	VDC						
Maximum Consumption Strobe Signal	-	1.5 mA						
Maximum Strobe Duty Cycle	_	16%						
Operating Temperature	-10°C to 40°C	[14°F to 104°F]						
Operating Maximum Humidity	80% without	condensation						
Weight	49g [0.11 lb] plus 48g [0.	.11 lb] per 90mm [3.54 in]						
Materials	Body: Anodized aluminum Side cover: Anodized Aluminum Diffuser: Polycarbonate							
Storage Temperature	0°C to 60°C [32°F to 140°F]							
Lifespan of LEDs (ON time)	6.8	years						
IP Protection	IP	65						

### Connections

M12 A-Coded Connections							
Pin Number and Wire Color	Strobe-Capable Models						
Pin 1 – Brown	+24VDC	+24VDC					
Pin 2 – White	Not Connected	Trigger NPN					
Pin 3 – Blue	0VDC	0VDC					
Pin 4 – Black	Not connected	Trigger PNP					

### M12 A-Coded Male Connector





# Lumher Vision Lighting High-Power Bar Light (FD Series)



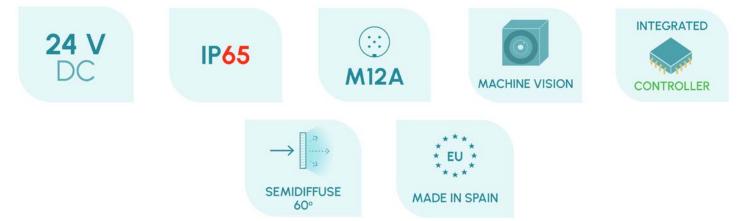
Lumher's FD Series has a larger dissipation surface and emits twice the light output of the PD series. The linear FD series is an excellent choice for demanding applications where maximum illumination is required

# lumher

#### **Features**

- IP65
- Integrated controller
- Built-in current protection
- Continuous high-brightness mode

	Lumher FD Series Vision Lighting High-Power Bar Light Selection Guide								
Part Number	Price	Light Emission	LED Length (mm [in])	Diffuser	Mode of Operation	Drawings			
FD01PD5CY	\$;06h]n:	White (5000K)	90 [3.54]	Semi-diffused (±30°)	Continuous only	PDF			
FD02PD5CY	\$;06h]o:	White (5000K)	180 [7.09]	Semi-diffused (±30°)	Continuous only	PDF			
FD04PD5CY	\$;06h]p:	White (5000K)	360 [14.17]	Semi-diffused (±30°)	Continuous only	PDF			
FD05PD5CY	\$;06h]s:	White (5000K)	450 [17.72]	Semi-diffused (±30°)	Continuous only	PDF			
FD07PD5CY	\$;;06h]t:	White (5000K)	630 [24.80]	Semi-diffused (±30°)	Continuous only	PDF			



# Lumher Vision Lighting High-Power Bar Light (FD Series)

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Lumher FD Series Vision Lighting High-Power Bar Light Specifications					
	Continuous Mode				
Strobe Input	_				
Overdrive	No				
Strobe Conditions (ON time, duty cycle)	-				
Maximum Rising Time	Зµs				
Maximum Falling Time	Зµs				
Connection	M12 A-coded 4-pole connector				
Consumption	White: 3.8 W per 90mm [3.54 in]				
Minimum Functioning Voltage	22.8 VDC				
Normal Functioning Voltage	24VDC ±5%				
Maximum Functioning Voltage	25.2 VDC				
Maximum Consumption Strobe Signal	_				
Maximum Strobe Duty Cycle	_				
Operating Temperature	-10°C to 40°C [14°F to 104°F]				
Operating Maximum Humidity	80% without condensation				
Weight	64g [0.14 lb] plus 192g [0.42 lb] per 90mm [3.54 in]				
Materials	Body: Anodized aluminum Side cover: Anodized Aluminum Diffuser: Polycarbonate				
Storage Temperature	0°C to 60°C [32°F to 140°F]				
Lifespan of LEDs (ON time)	6.8 years				
IP Protection	IP65				

### Connections

M12 A-Coded Connections				
Pin Number and Wire Color Continuous-Only Models				
Pin 1 – Brown	+24VDC			
Pin 2 – White	Not Connected			
Pin 3 – Blue	0VDC			
Pin 4 – Black	Not connected			

### M12 A-Coded Male Connector



### Lumher Backlight Lighting (BD Series)

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Lumher's BD (or backlight) Series combines mechanical design, robustness and homogeneity to achieve optimum results in your machine vision projects.

These backlights provide flicker-free illumination while preserving the luminous flux throughout the life of the product.

Optional mounting accessories allow these backlights to be installed at an angle of either  $0^{\circ}$  or  $90^{\circ}$ .

The product is made of anodized aluminium with IP65 watertightness and is available in two sizes.

### **Features**

- Robust aluminum body IP65
- Integrated controller
- Continuous only or strobe-capable models available

	Lumher BD Series Backlight Lighting Selection Guide								
Part Number	Price	Light Emission	Illumination Area (mm [in])	Diffuser	Mode of Operation	Drawings			
BD1PD5CY	\$;06h]_:	White (5000K)	100 x 100 [3.94 x 3.94]	Semi-diffused (±30°)	Continuous only	PDF			
BD2PD5CY	\$;06h]#:	White (5000K)	100 x 190 [3.94 x 7.48]	Semi-diffused (±30°)	Continuous only	PDF			
BD1ZD5CY	\$;06h]?:	White (5000K)	100 x 100 [3.94 x 3.94]	Semi-diffused (±30°)	Strobe-capable	PDF			
BD2ZD5CY	\$;;;006h],:	White (5000K)	100 x 190 [3.94 x 7.48]	Semi-diffused (±30°)	Strobe-capable	PDF			

# Lumher Backlight Lighting (BD Series)

# lumher

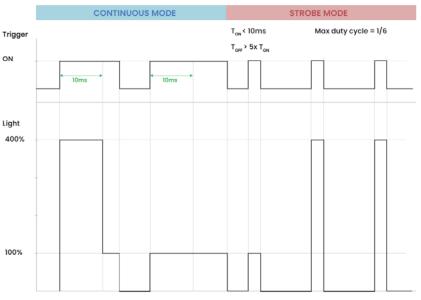
Lumher BD Series Backlight Lighting Specifications				
	Continuous Mode	Strobe Mode		
Strobe Input	-	PNP: More than 22V for ON; Less than 1V for OFF NPN: Less than 1V for ON; More than 23V for OFF		
Overdrive	No	Yes		
Strobe Conditions (ON time, duty cycle)	-	For first 10ms, 4X normal brightness; then normal brightness. To re-engage strobe, LEDs must be off for at least 50ms.		
Maximum Rising Time	31	2L		
Maximum Falling Time	3	S		
Connection	M12 A-coded 4	-pole connector		
Consumption	BD1 models: White: 7W BD2 models: White: 14W	BD1 models: White: 28W BD2 models: White: 56W		
Minimum Functioning Voltage	22.8	VDC		
Normal Functioning Voltage	24VD	C ±5%		
Maximum Functioning Voltage	25.2	VDC		
Maximum Consumption Strobe Signal	_	1.5 mA		
Maximum Strobe Duty Cycle	_	16%		
Operating Temperature	-10°C to 40°C [14°F to 104°F]			
Operating Maximum Humidity	80% without condensation			
Weight	BD1 models: 500g [1.10 lb] BD2 models: 796g [1.75 lb]			
Materials	Body: Anodized aluminum Side cover: Anodized Aluminum Diffuser: Polycarbonate			
Storage Temperature	0°C to 60°C [32°F to 140°F]			
Lifespan of LEDs (ON time)	6.8 years			
IP Protection	IP65			

### Connections

M12 A-Coded Connections				
Pin Number and Wire Color	Strobe-Capable Models			
Pin 1 – Brown	+24VDC	+24VDC		
Pin 2 – White	Not Connected	Trigger NPN		
Pin 3 – Blue	0VDC	0VDC		
Pin 4 – Black	Not connected	Trigger PNP		

### M12 A-Coded Male Connector





lumher

6-1

### **Lumher Ring Lighting** (RD Series)



• IP65

RD1PD5CY

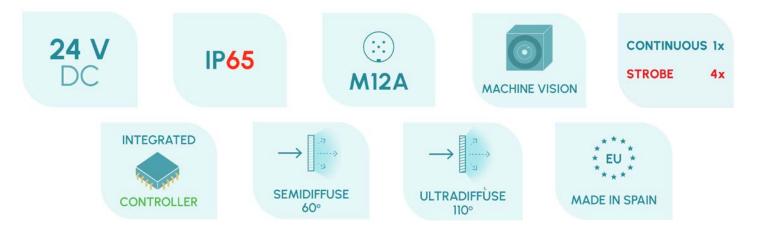
Lumher's RD Series of ring lights provides an exceptionally durable and robust solution when direct illumination is required. The RD Series lights are built in a one-piece anodized aluminum frame. Thanks to the compact and versatile form factors of the lights, the illumination they provide facilitates precise object detection, tracking, and inspection. This makes them ideal for applications requiring reliable and comprehensive visual analysis in industrial and automation environments.

This type of light fixture is widely used in robotics, where (because the robot is in motion) it is recommended that lighting devices have the smallest possible dimensions to avoid possible mechanical interference. Such lighting is also recommended for certain production lines, where limited space calls for the use of compact lighting.

#### Features

- Robust aluminum body
- Integrated controller
- Available in compact or extended size
- · Continuous only or strobe-capable models available
- Semi-diffused or ultra-diffused illumination options available

Lumher RD Series Ring Lighting Selection Guide						
Part Number	Price	Light Emission	Inside Dimension (mm [in])	Diffuser	Mode of Operation	Drawings
RD1PD5CY	\$;06h]u:	White (5000K)	59 [2.32] diameter	Semi-diffused (±30°)	Continuous only	PDF
RD2PD5CY	\$;06h]v:	White (5000K)	135 x 135 [5.31 x 5.31]	Semi-diffused (±30°)	Continuous only	<u>PDF</u>
RD1ZD5CY	\$;06h]x:	White (5000K)	59 [2.32] diameter	Semi-diffused (±30°)	Strobe-capable	PDF
RD2ZD5CY	\$;;006h]z:	White (5000K)	135 x 135 [5.31 x 5.31]	Semi-diffused (±30°)	Strobe-capable	<u>PDF</u>
RD1ZD5UY	\$;;06h]]:	White (5000K)	59 [2.32] diameter	Ultra-diffused (±55°)	Strobe-capable	PDF
<u>RD2ZD5UY</u>	\$;;;006h][:	White (5000K)	135 x 135 [5.31 x 5.31]	Ultra-diffused (±55°)	Strobe-capable	<u>PDF</u>
RD1PF5CY	\$;06h[7:	Infrared (850nm)	59 [2.32] diameter	Semi-diffused (±30°)	Continuous only	PDF
RD2PF5CY	\$;06h[c:	Infrared (850nm)	135 x 135 [5.31 x 5.31]	Semi-diffused (±30°)	Continuous only	PDF



#### 1-800-633-0405

# Lumher Ring Lighting (RD Series)

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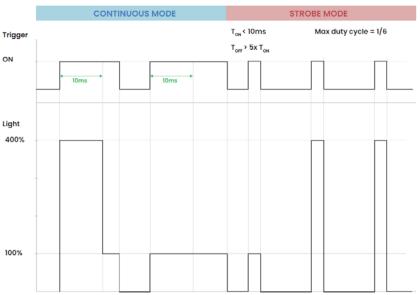
Lumher RD Series Ring Lighting Specifications				
	Continuous Mode Strobe Mode			
Strobe Input	-	PNP: More than 22V for ON; Less than 1V for OFF NPN: Less than 1V for ON; More than 23V for OFF		
Overdrive	No	Yes		
Strobe Conditions (ON time, duty cycle)	-	For first 10ms, 4X normal brightness; then normal brightness. To re-engage strobe, LEDs must be off for at least 50ms.		
Maximum Rising Time	3	μs		
Maximum Falling Time	3	μs		
Connection	M12 A-coded 4	l-pole connector		
Consumption	RD1 models: White: 7.6 W RD2 models: White: 15.2 W RD1 models: Infrared: 4.0 W RD2 models: Infrared: 8.0 W	RD1 models: White: 30.4 W RD2 models: White: 60.8 W		
Minimum Functioning Voltage	22.8 VDC			
Normal Functioning Voltage	24VDC ±5%			
Maximum Functioning Voltage	25.2 VDC			
Maximum Consumption Strobe Signal	-	1.5 mA		
Maximum Strobe Duty Cycle	-	16%		
Operating Temperature	-10°C to 40°C	[14°F to 104°F]		
Operating Maximum Humidity	80% without condensation			
Weight	RD1: 0.615 kg [1.36 lb] RD2: 1.276 kg [2.81 lb]			
Materials	Body: Anodized aluminum Side cover: Anodized Aluminum Diffuser: Polycarbonate			
Storage Temperature	0°C to 60°C [32°F to 140°F]			
Lifespan of LEDs (ON time)	6.8 years			
IP Protection	IP65			

### Connections

M12 A-Coded Connections				
Pin Number and Wire Color	Strobe-Capable Models			
Pin 1 – Brown	+24VDC	+24VDC		
Pin 2 – White	Not Connected	Trigger NPN		
Pin 3 – Blue	0VDC	0VDC		
Pin 4 – Black	Not connected	Trigger PNP		

### M12 A-Coded Male Connector





### Lumher Spot Lighting (BS Series)

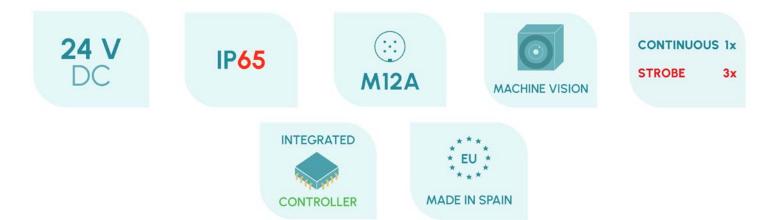


Lumher's BS Series provides an exceptionally durable and robust solution when focused or directional lighting is required. These lights are especially recommended for projects where the target surface is at a considerable distance from the camera. Fabricated from anodized aluminum, these lights provide IP65 protection.

### **Features**

- Robust aluminum body
- IP65
- Integrated controller
- Continuous only or strobe-capable models available

Lumher BS Series Spot Lighting Selection Guide						
Part Number	Price	Light Emission	Housing Size (mm [in])	Diffuser	Mode of Operation	Drawings
<u>BS1PD5QY</u>	\$;06h[0:	White (5000K)	125 x 125 x 25 [4.92 x 4.92 x 0.98]	Spot (±3°)	Continuous only	PDF
<u>BS1ZD5QY</u>	\$;06h[1:	White (5000K)	125 x 125 x 25 [4.92 x 4.92 x 0.98]	Spot (±3°)	Strobe-capable	PDF



#### 1-800-633-0405

### Lumher Spot Lighting (BS Series)

# lumher

Lumher BS Series Spot Lighting Specifications				
	Continuous Mode Strobe Mode			
Strobe Input	-	PNP: More than 22V for ON; Less than 1V for OFF NPN: Less than 1V for ON; More than 23V for OFF		
Overdrive	No	Yes		
Strobe Conditions (ON time, duty cycle)	-	For first 50ms, 3X normal brightness; then normal brightness. To re-engage strobe, LEDs must be off for at least 150ms.		
Maximum Rising Time	3	ha		
Maximum Falling Time	3	ha		
Connection	M12 A-coded 4	-pole connector		
Consumption	11.5 W	48.0 W		
Minimum Functioning Voltage	22.8	VDC		
Normal Functioning Voltage	24VDC ±5%			
Maximum Functioning Voltage	25.2 VDC			
Maximum Consumption Strobe Signal	– 1.5 mA			
Maximum Strobe Duty Cycle	- 25%			
Operating Temperature	-10°C to 40°C [14°F to 104°F]			
Operating Maximum Humidity	80% without condensation			
Weight	0.5 kg [1.1 lb]			
Materials	Body: Anodized aluminum Side cover: Anodized Aluminum Diffuser: Polycarbonate			
Storage Temperature	0°C to 60°C [32°F to 140°F]			
Lifespan of LEDs (ON time)	6.8 years			
IP Protection	IP65			

### Connections

M12 A-Coded Connections				
Pin Number and Wire Color	Strobe-Capable Models			
Pin 1 – Brown	+24VDC	+24VDC		
Pin 2 – White	Not Connected	Trigger NPN		
Pin 3 – Blue	0VDC	0VDC		
Pin 4 – Black	Not connected	Trigger PNP		

### M12 A-Coded Male Connector



